Work Order ID 114767

March-11-14 4:12:37 PM

114767

Item ID: D4635-1
Revision ID:
Item Name: Fwd Ceiling Panel, LH
Start Date: 12/03/2014 **Start Qty:** 1.00 *1*
Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100*

Setup **Start** *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** MLJ **Date:** 1403-12
QC: _____ **Date:** _____

Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Run **Start** *NR1*
Stop *NR2*

Draw Nbr	Revision Nbr
D4635	E

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	HAND FINISHING THERMOFORMING	0.00							DAS 07 9-89
100 Thermoform		0.00				X1			14/04/03
Thermoforming Machine	**Memo** Cut Blanks								
105	Dry Material	0.00							DAS 07 9-89
105 HandThermo		0.00				X1			14/04/03
Hand Finishing Thermoforming	**Memo** Dry Sheet as per QSI022 POLYCARBONATE								

Temp: ~~245 deg. F~~

Time IN: 5:00 PM

Time OUT: 6:00 AM

APR 0 3 2014

Per.....

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Item ID: D4635-1
Revision ID:
Item Name: Fwd Ceiling Panel, LH
Start Date: 12/03/2014 **Start Qty:** 1.00 *1*
Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110 *110* Thermoform Thermoforming Machine	THERMOFORMING MACHINE **Memo** Thermoform as per Dwg. D4635-1 and Folio FTA147 Dwg. Rev. E Folio Rev. D Visually inspect for proper formation and texture	0.00 0.00				X1			DAS 07 9-69 14/04/03
130 *130* Thermoform Thermoforming Machine	HAND FINISHING THERMOFORMING **Memo** Trim to Finished Dimensions	0.00 0.00				X1			B 14/05/02
140 *140* QC Quality Control	QC6- Inspect dimensions to drawing Dimensional Inspection **Memo** Fill out Inspection Sheet Rev A	0.00 0.00							DAS 27 9-69 14/5/5

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Item ID: D4635-1
Revision ID:
Item Name: Fwd Ceiling Panel, LH
Start Date: 12/03/2014 **Start Qty:** 1.00 *1*
Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100* **Setup Start** *NS1*
Stop *NS2*
Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____
QC: _____ **Date:** _____
Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									
QC	**Memo**	0.00							
Quality Control									
160		0.00							
160	Packaging								
Packaging	**Memo**	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	**Memo**	0.00							
Quality Control									

DAS 27 9-29

MF

SAP 14/05/06

14/5/7

14 05-06

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Picklist Print

March-11-14 4:15:22 PM

Work Order ID: 114767

114767

Parent Item: D4635-1

D4635-1

Parent Item Name: Fwd Ceiling Panel, LH

Start Date: 12/03/2014 **Required Date:** 12/03/2014

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev. A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B
Dwg. Update 12/11/08 DL IPP Rev. C Dwg Update
13/07/09 DL IPP Rev D Dwg Update, Material
Change 14/01/20 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	840.7600	14.9 **	15			

MLEXS.093-F6006-07

GE PLASTICS LEXAN SHEET

Location	Loc Qty	Loc Code
MAT023	840.76	
114459	229.26	
123105	38	
124501	573.5	

128668

15 sq ft

14/05/05

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐				
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐				
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐				
Large Fab ☐	Composite ☐	Supplier ☐					

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

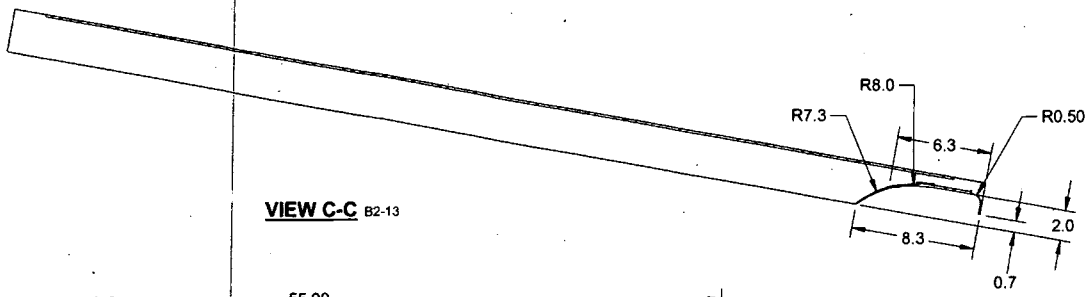
FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

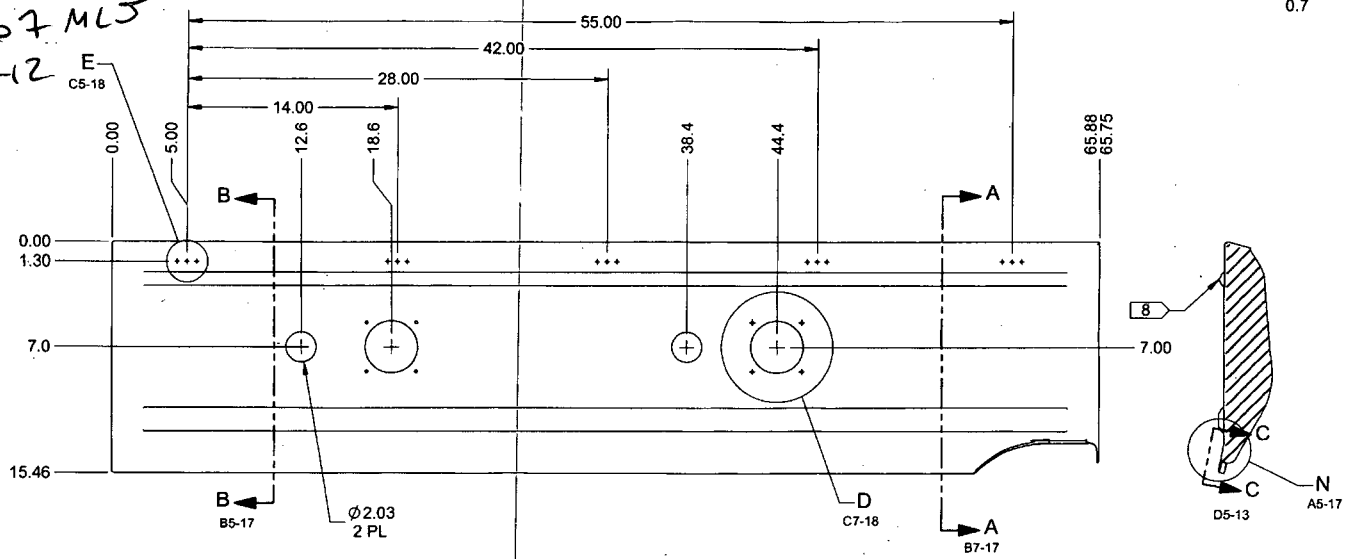
General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other



VIEW C-C B2-13

114767 MLS
14-03-12



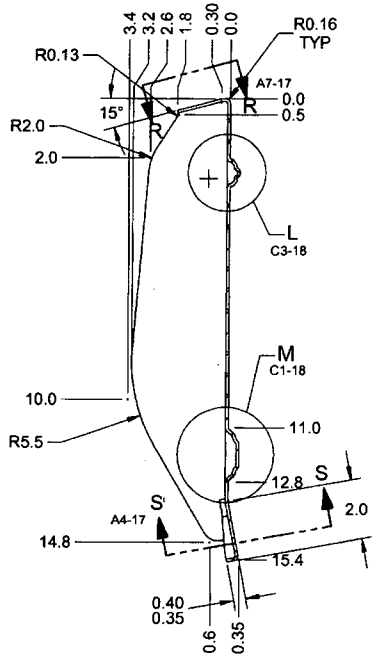
RELEASED
2014-01-22

NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 4.39 lbs
8) TEXTURE ON THIS SIDE
9) TRIM D4635-1 PER TOOL DT9839
10) THERMOFORM D4635-1 PER QSI 022 USING DT9847 TOOL
MIN. THICKNESS AFTER FORMING:
SHADED AREA = 0.040
RIDGES/EDGES = 0.060
ELSEWHERE = 0.070

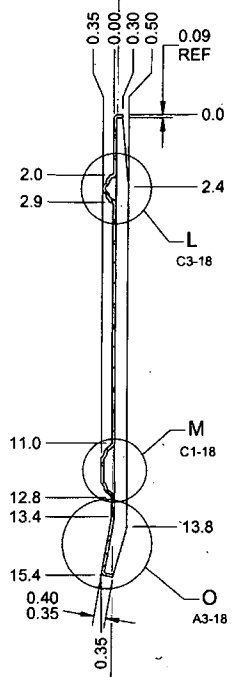
D4635-1 LH, FWD CEILING PANEL

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	BC	DRAWING NO. D4635 REV. E
MFG. APPR.		SHEET 13 OF 18
APPROVED		TITLE OUTBOARD CEILING PANELS SCALE NTS
DE APPR.		
DATE 14.01.09		

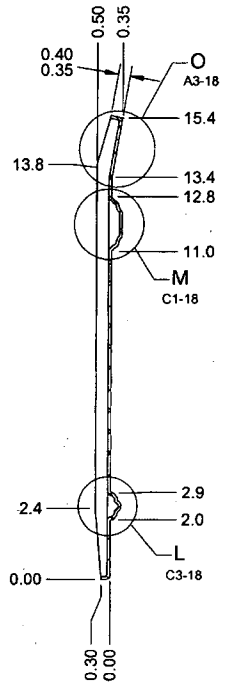
COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



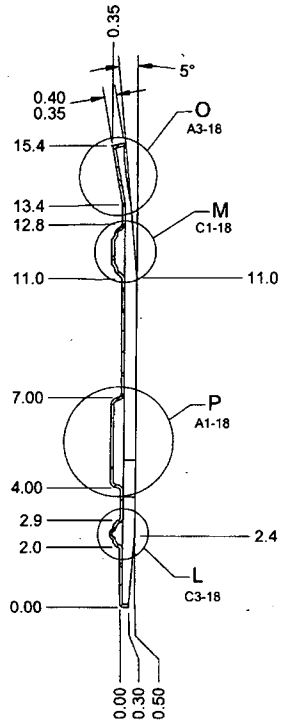
SECTION A-A
SECTION A'-A' OPPOSITE B3-13 B3-14
SCALE 2X



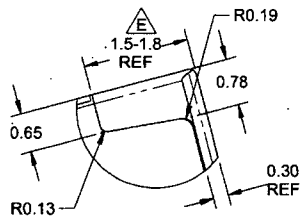
SECTION B-B B7-13 B7-14
SCALE 2X



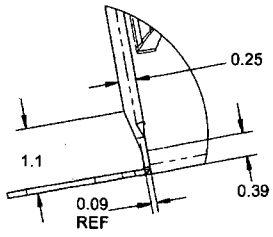
SECTION G-G B4-15 B4-16
SCALE 2X



SECTION K-K C6-16
SCALE 2X



AUXILIARY VIEW R-R D7-17
SECTION R'-R' OPPOSITE
SCALE 2X

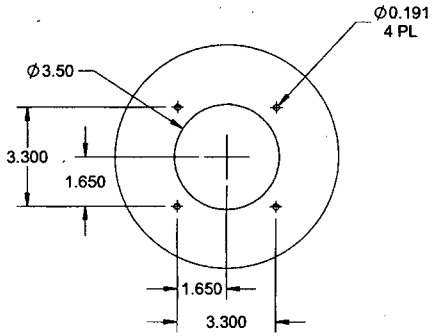


AUXILIARY VIEW S-S B7-17
SECTION S'-S' OPPOSITE
SCALE 2X

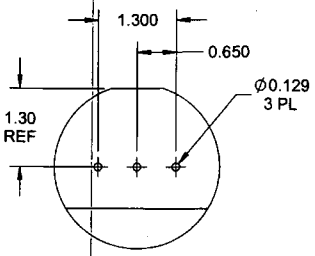
RELEASED
2014-03-22

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	BC	DRAWING NO. D4635 REV. E
MFG. APPR.		SHEET 17 OF 18
APPROVED		TITLE OUTBOARD CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.01.09	

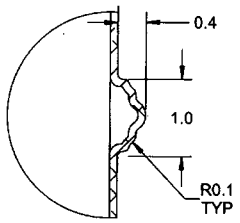
COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



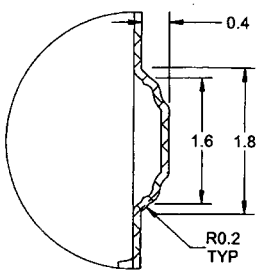
DETAIL D B4-13 B3-14 B5-15 B5-16
SCALE 2X



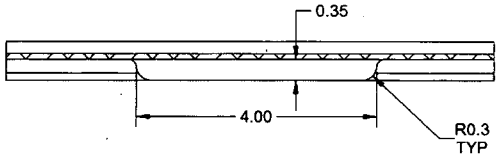
DETAIL E C7-13 B6-14 C6-15 B5-16
SCALE 4X



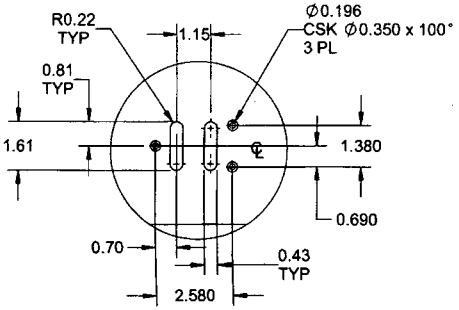
DETAIL L B2-17 B4-17 C5-17 C7-17
SCALE 1.5X



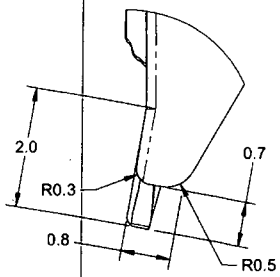
DETAIL M C2-17 C3-17 C5-17 C7-17
SCALE 1.5X



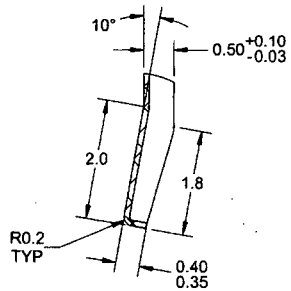
SECTION I-I B5-16
SCALE 4X



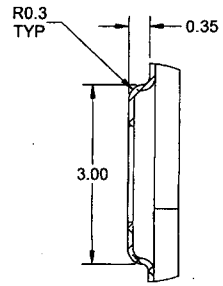
DETAIL Q C5-16
SCALE 2X



DETAIL N B2-13
SCALE 2X



DETAIL O D2-17 D3-17 B5-17
SCALE 2X



DETAIL P C2-17
SCALE 4X

RELEASED
2014 -01- 22

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4635 REV. E
CHECKED	DC	SHEET 18 OF 18
MFG. APPR.		TITLE OUTBOARD CEILING PANELS SCALE NTS
APPROVED		
DE APPR.		
DATE	14.01.09	

COPYRIGHT © 2012 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

DART AEROSPACE LTD

Description: Fwd Ceiling Panel		**Work Order:**	114767
Inspection Drawing: 4635-1	**Rev:** E	**Part Number:**	D4635-1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
14.00	+/- 0.030	14.00	✓		M-T	ENG-05
28.00	+/- 0.030	28.06	✓			
42.00	+/- 0.030	42.00	✓			
55.00	+/- 0.030	55.00	✓			
5.00	+/- 0.030	5.03	✓			
12.6	+/- 0.100	12.6	✓			
18.6	+/- 0.100	18.6	✓			
38.4	+/- 0.100	38.6	✓			
44.4	+/- 0.100	38.4	✓			
1.3	+/- 0.100	44.4	✓			
7.0	+/- 0.100	1.3	✓		Vern	# SEAB-05
7.00	+/- 0.030	7.0	✓		M-T	ENG-05
Ø2.03	+0.042 -0.001	7.0	✓		"	"
Ø 0.791	+0.005 -0.000	Ø2.03	✓		Vern	SEAB-05
Ø 3.50	+/- 0.010	Ø 0.791	✓			
3.300	+/- 0.010	Ø 3.50	✓			
1.650	+/- 0.010	1.650	✓			
Ø1.29	+0.005 -0.000	Ø1.29	✓			
1.300	+/- 0.010	1.300	✓			
0.650	+/- 0.010	0.650	✓			

68-6

Measured by: SAD **Date** 4/05/05	**Checked By:** DAS SAD **Date** 4/5/05	**QC inspector:** **Date**	**Engineering Approval** *(if necessary)*: **Date**